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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/971,081	10/05/2001	Ok-Hyun Son	P54757RE2	2098
8439	7590	05/18/2005	EXAMINER	
ROBERT E. BUSHNELL 1522 K STREET NW SUITE 300 WASHINGTON, DC 20005-1202			HABERMEHL, JAMES LEE	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/971,081	SON, OK-HYUN
	Examiner James L. Habermehl	Art Unit 2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 February 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-54 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-54 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 13 April 1999 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2651

1. This Office action is in response to papers filed 24 February 2005, which papers have been placed of record in the file.
2. Upon further review of the application by the examiner, the finality of the rejection of the last Office action is withdrawn.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 32 and 50-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner can find no basis for regulating head movement based on data address marks. Instead, since it appears the head can only be regulated to move radially across the tracks, head movement appears to be regulated based on servo sector data. It appears to the examiner that applicant is referring to regulating the position circumferentially along the track at which the head is used to read data, and the examiner will address the claim limitations with that understanding. The use of the word "movement" renders the claim indefinite; however, at this time the examiner will assume the above interpretation for purposes of examination. Correction is required.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 6, 16-17, 20-21, 24, 26-28, 31-32, 35-51 and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Malone, Sr. Malone, Sr. Figures 2A, 5A-8, and 10 meet all the limitations of claims 1, 16, 20, 24, 26-27, 31, 37, 40, 44, 46-47, 49, and 54. Figure 5A shows recording said data address mark to establish synchronization requested for reading user data in at least two different recording locations (14 and 62, where sync bytes correspond to the claimed data address marks as they indicate the location of the data along the track), and Figure 8 shows when one data address mark (14) is detected (92) to establish synchronization requested for reading user data (96), regarding said one mark as an effective mark of a corresponding data region, and skipping a remaining mark (62) when any one mark is normally detected (98), which comprises distinguishing between the two address marks. Figure 2A shows data blocks (34) preceding said servo information areas (30).

Regarding claims 2, 17, 21, 28, 35-36, 38-39, 45, and 48 Figure 5A shows sync bytes 14 and 62 are recorded in two separate locations, and col. 7, lines 47-49 show the second data address mark (secondary sync byte) recorded with a pattern different from the first pattern.

Regarding claim 3, col. 5, lines 56-57 show each said address mark (sync byte) being constructed of one (or more) byte of information.

Regarding claim 6, 32 (as best the examiner understands the claim), 41-43, and 50-51 (as best the examiner understands the claims) col. 13, lines 49-57 show the data address mark (sync

byte) being detected by a disk drive controller performing a masking function with respect to the data address mark (sync byte).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the Admitted Prior Art and Malone, Sr. Regarding claims 7 and 11-12, the Admitted Prior Art shows a headerless servo recording system with headerless servo sectors and data sectors with an ID field and a data field with a single data address mark.

Malone, Sr. Figure 5A shows recording a data address mark to establish synchronization requested for reading user data in at least two different recording locations (14 and 62, where sync bytes correspond to the claimed data address marks as they indicate the location of the data along the track), Figures 8 and 10 show detecting said data address mark to confirm validity of user data following said data address mark (92, 94), and Figure 8 shows when one data address mark (14) is detected (92) to establish synchronization requested for reading user data (96), regarding said one mark as an effective mark of a corresponding data region for confirming the validity of the data, and skipping a remaining mark (62) when any one mark is normally detected (98), which comprises distinguishing between the two address marks. Malone, Sr. also shows a disk with tracks having servo sectors and data sectors, an error correction code region, a

transducer head for reading and writing data and read servo, and means for positioning the head across the tracks (Figures 2A and 6).

Malone, Sr. shows an embodiment using servo blocks with header information, col. 2, lines 24-30 show it was known to Malone, Sr. to use an identification field in each data sector, col. 6, lines 23-25, col. 7, lines 7-10 show the invention of Malone, Sr. can be used with other servo schemes and disk formats, and claim 1 in light of the further limitation of claim 5 shows that the invention of Malone, Sr. is not limited to only headerless data blocks. Malone, Sr. does all this for the purpose of providing sync byte redundancy to improve overall disk drive reliability.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosures of Malone, Sr. with the Admitted Prior Art to yield a headerless servo recording system comprising data sectors that include identification fields and that uses redundant sync bytes for data detection, the motivation being to provide sync byte redundancy to improve overall disk drive reliability in a headerless servo recording system.

Regarding claims 8 and 13, Malone, Sr. Figure 5A shows sync bytes 14 and 62 are recorded in two separate locations, and col. 7, lines 47-49 show the second data address mark (secondary sync byte) recorded with a pattern different from the first pattern.

Regarding claims 9 and 14, Malone, Sr. col. 5, lines 56-57 show each said address mark (sync byte) being constructed of one (or more) byte of information.

Regarding claims 10 and 15, Admitted Prior Art Figure 2 shows the claimed identification field.

9. Claims 16-54 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001); *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

In claims 16, 20, 24, 26, 31, 32, and 35-54, applicant has omitted the language "skipping a remaining data address in said different recording locations of said data track, when any one data address mark recorded in said different recording locations is normally detected" and "said transducer head not utilizing a remaining data address mark recorded in said different recording locations of said data track, when a data address mark recorded in a different data address regions is detected." This language was specifically added to claims in the original patent to place it in condition for allowance.

Response to Arguments

10. Applicant's arguments filed 24 February 2005 have been fully considered but they are not persuasive.

Applicant has argued that Section 251 allows for enlarging the scope of the claims in a reissue application within a two year window (amendment pp. 3-5), that the omitted clauses from the patented claims were never rejected and thus applicant can broaden without incorporating surrendered subject matter (amendment pp. 5-7), that the reissue claims do not constitute recapture because they are subject matter wholly different from the subject matter of the patented claims (amendment pp. 7-9), and that applicant did not surrender any subject matter because applicant argued that the amendment was not required to overcome the cited art (amendment pp. 9-13). Applicant's arguments regarding the examiner's reliance upon dependent claims (amendment pp. 4-5) are deemed by the examiner to be moot as such reliance is not placed in the instant rejection.

In response, the examiner points in particular to two passages from the M.P.E.P., Section 1412.02, which for convenience are quoted below. This first passage shows the subject matter in question is surrendered due to the amendment adding the additional limitations which were specifically cited by the examiner as allowable and subsequently as the reasons for allowance of the patented claims:

(B) Example (2) - Amendment of the claims without argument:

The limitation omitted in the reissue claim(s) was added in the original application claims for the purpose of making the application claims allowable over a rejection or objection made in the application. Even though applicant made no argument on the record that the limitation was added to obviate the rejection, the nature of the addition to the claim can show that the limitation was added in direct reply to the

rejection. This too will establish the omitted limitation as relating to subject matter previously surrendered. To illustrate this, note the following example:

The original application claims recite limitations A+B+C, and the Office action rejection combines two references to show A+B+C. In the amendment replying to the Office action, applicant adds limitation D to A+B+C in the claims, but makes no argument as to that addition. The examiner then allows the claims. Even though there is no argument as to the addition of limitation D, it must be presumed that the D limitation was added to obviate the rejection. The subsequent deletion of (omission of) limitation D in the reissue claims would be presumed to be a broadening in an aspect of the reissue claims related to surrendered subject matter. Accordingly, the reissued claims would be barred by the recapture doctrine.

This second passage from the M.P.E.P., Section 1412.02, shows the reissue claims constitute recapture of surrendered subject matter as all the reissue claims are impermissibly broadened with respect to the limitations of the patented claims that were specifically cited as the reasons for allowance as discussed above, and thus the surrender-generating limitation as discussed below (emphasis in the original):

2. Comparison of Reissue Claims Narrowed/Broadened *Via- à-vis* the Patent Claims

The 'patent claims,' in the context of recapture case law, are claims which issued in the original patent for which reissue is now being sought. As pointed out above, where the reissue claims are narrower than the claims of the original patent in all aspects, then there

can never be recapture. If reissue claims are equal in scope to the patent claims, there is no recapture as to those reissue claims. Where, however, reissue claims are both broadened and narrowed as compared with the original patent claims, the nature of the broadening and narrowing must be examined to determine whether the reissue claims are barred as being recapture of surrendered subject matter. If the claims are 'broader than they are narrower in a manner directly pertinent to the subject matter... surrendered during prosecution' (*Clement*, 131 F.3d at 1471, 45 USPQ2d at 1166), then recapture will bar the claims. This narrowing/broadening *vis- à-vis* the patent is broken down into four possibilities that will now be addressed.

The "limitation" presented, argued, or stated to make the claims patentable over the art (in the application) "generates" the surrender of claimed subject matter. For the sake of simplification, this limitation will be referred to throughout this section as the *surrender-generating limitation*. If a claim is presented in a reissue application that omits, in its entirety, the surrender-generating limitation, that claim impermissibly recaptures what was previously surrendered, and that claim is barred under 35 U.S.C. 251. This terminology will be used in the discussion of the four categories of narrowing/broadening *vis- à-vis* the **patent** that follows.

(a) Reissue Claims are Narrower in Scope Than Patent Claims, in Area Not Directed to Amendment/Argument Made to Overcome Art Rejection in Original Prosecution; are Broader in Scope by Omitting Limitation(s) Added/Argued To Overcome Art Rejection in Original Prosecution:

In this case, there is recapture.

This situation is where the patent claims are directed to combination ABC and the reissue

claims are directed to ABD. Element C was either a limitation added to AB to obtain allowance of the original patent, or was argued by applicant to define over the art (or both). Thus, addition of C (and/or argument as to C) has resulted in the surrender of any combination of A & B that does not include C; this is the surrendered subject matter. Element D, on the other hand, is not related to the surrendered subject matter. Thus, the reissue claim, which no longer contains C, is broadened in an area related to the surrender, and the narrowing via the addition of D does not save the claim from recapture since D is not related to the surrendered subject matter.

Reissue claims that are broader than the original patent claims by not including the surrender-generating limitation (element C, in the example given) will be barred by the recapture rule even though there is narrowing of the claims not related to the surrender-generating limitation. As stated in the decision of *In re Clement*, 131 F.3d at 1470, 45 USPQ2d at 1165, if the reissue claim is broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim. *Pannu v. Storz Instruments Inc.*, *supra*, then brings home the point by providing an actual fact situation in which this scenario was held to be recapture.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Otani Figures 5-6, Herting Figures 2A-5, Chiba Figures 4-6, and Zook et al. Figures 4A-6B all show plural data address marks within each data sector before the servo sector.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L. Habermehl whose telephone number is (571)272-7556. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571)272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Habermehl/jlh
10 May 05



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